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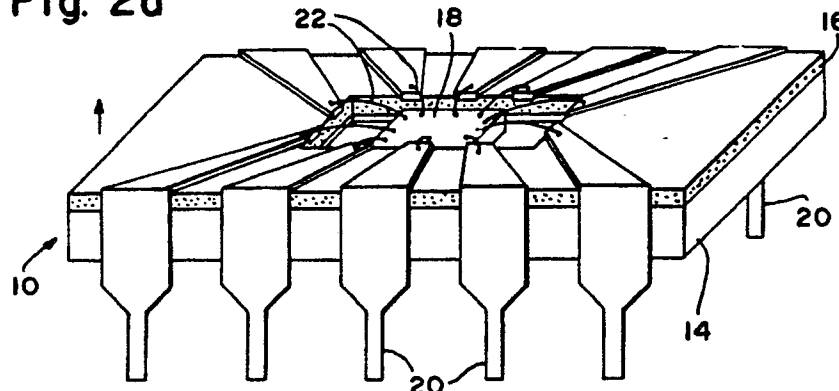
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54 Use of venting slots to improve hermetic seal for semiconductor dice housed in ceramic packages.

57 In hermetically sealing a base structure (10) of a ceramic package for a semiconductor device to a cap structure (12) of the device, one or more venting slots (36) are initially, according to the invention, provided in the base sealing layer (16) or in the cap sealing layer (26). The base and cap structures are then fused together along the two sealing layers and electrical leads (20) by bringing the structures into

contact and heating them to a temperature high enough to cause the sealing material to flow readily. The venting slots allow air to escape during the fusing step. this inhibits the formation of air bubbles along the sealing interface and thereby improves the hermeticity of the seal. The structures are subsequently cooled to harden the sealing layers into a unitary layer (28).

Fig. 2a



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	PATENT ABSTRACTS OF JAPAN vol. 8, no. 247 (E-278)(1684) 13 November 1984, & JP-A-59 124146 (NIPPON DENKI) 18 July 1984, * the whole document *	1	H01L21/50
A	--- PATENT ABSTRACTS OF JAPAN vol. 9, no. 274 (E-354)(1997) 31 October 1985, & JP-A-60 117644 (FUJITSU) 25 June 1985, * the whole document *	1-3	
A	--- PATENT ABSTRACTS OF JAPAN vol. 8, no. 119 (E-248)(1556) 05 June 1984, & JP-A-59 32156 (HITACHI) 21 February 1984, * the whole document *	1, 2	
A,D	--- PATENT ABSTRACTS OF JAPAN vol. 2, no. 75 (E-78)(2921) 14 June 1979, & JP-A-53 39859 (HITACHI) 04 December 1978, * the whole document *	1, 2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H01L
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	30 MAY 1990	DELPORTE B. P. M.	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	